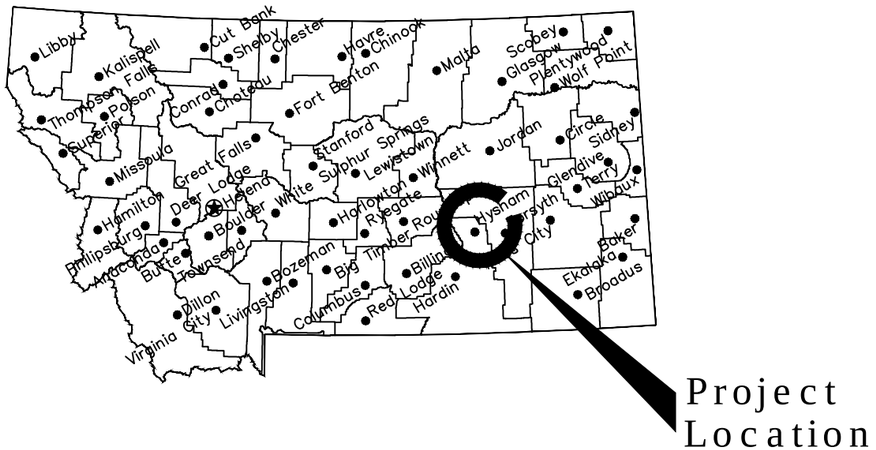
MONTANA FISH, WILDLIFE & PARKS

AMELIA ISLAND FAS SITE DEVELOPMENT

TREASURE COUNTY, MONTANA

FWP #7133736

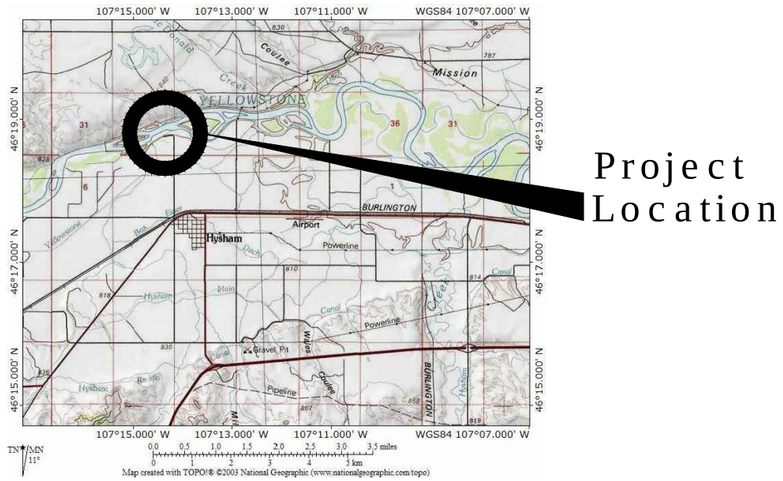


Project Location

Location Map

No Scale

North



Project Location

Vicinity Map

No Scale

MONTANA FISH, WILDLIFE AND PARKS
DESIGN AND CONSTRUCTION

MAILING ADDRESS:
PO BOX 200701
HELENA, MT 59620-0701

PHYSICAL ADDRESS:
1522 9th AVENUE
HELENA, MT 59601

TEL 406.841.4000
FAX 406.841.4004
fwp.mt.gov/Doing Business/Design&Construction

DRAWING INDEX

MONTANA
JASON SENN
No. 21922PE
LICENSED PROFESSIONAL ENGINEER

J. Senn	08-26-14				
DRAWN BY:	DATE:	APPROVED BY:	DATE:	APPROVED BY:	DATE:
M. McNearney	08-15-14				
CHECKED BY:	DATE:	APPROVED BY:	DATE:	APPROVED BY:	DATE:

Montana Fish, Wildlife & Parks

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TITLE SHEET

AMELIA ISLAND FAS (NEAR HYSHAM, MT)

SHEET: 1 of 9

Scale:

0 60 120

ESTIMATED QUANTITIES

MATERIAL	QUANTITY	UNIT
BASE BID		
4" MINUS PIT RUN, 6" DEPTH	392	CY
3/4" MINUS CBC, 4" DEPTH	262	CY
PUSH-IN SLAB BOAT RAMP	480	SF
CAST IN PLACE BOAT RAMP	320	SF
REVEGETATION	0.50	AC
BMP (WATTLE)	350	LF
BMP (TURBIDITY CURTAIN)	80	LF
INSTALL BARRIER ROCKS	20	EA
PIN DOWN PARKING BLOCKS	13	EA
POST AND CABLE BARRIER	70	LF

NOTES:

1. SALVAGE ALL EXISTING SIGNS ENCOUNTERED DURING EXCAVATION CONSTRUCTION. RESET AS DIRECTED BY THE PROJECT REPRESENTATIVE, SEE TECHNICAL SPECIFICATIONS, 02112
2. OWNER WILL ESTABLISH INITIAL SURVEY CONTROL AND ALIGNMENT GRADE STAKES, SEE TECHNICAL SPECIFICATION 01050, FIELD ENGINEERING FOR ADDITIONAL CONTRACTOR SURVEYING REQUIREMENTS.
3. CONTRACTOR CAN USE THE EXISTING AND PROPOSED FOOTPRINT FOR STAGING AND STOCKPILING, WITH EXCEPTIONS, SEE TECHNICAL SPECIFICATION 01010.
4. ANY UTILITIES DEPICTED ON THESE PLANS ARE IN ACCORDANCE WITH THEIR ACHIEVED "QUALITY LEVELS" AS DEFINED IN THE AMERICAN SOCIETY OF CIVIL ENGINEER'S DOCUMENT ASCE 38, "STANDARD FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."
5. ALL TREES ARE TO REMAIN IN PLACE. KEEP DISTURBANCES TO A MINIMUM.

Point Table

Point #	Elevation	Northing	Easting	Description
1	100.00	10000.00	5000.00	CP1
172	99.87	9761.90	5119.92	CP2
285	103.36	9617.95	5315.98	CP3

LEGEND

EXISTING FEATURES

- CONTROL POINT (CP2)
- EDGE OF ROAD
- BARBED WIRE FENCE

PROPOSED FEATURES

- LATRINE
- GRAVEL SURFACING
- BARRIER ROCK
- BMP (TURBIDITY CURTAIN)
- (WATTLE)
- CAST IN PLACE CONCRETE BOAT RAMP
- PUSH IN CONCRETE BOAT RAMP

J. Senn	08-26-14		
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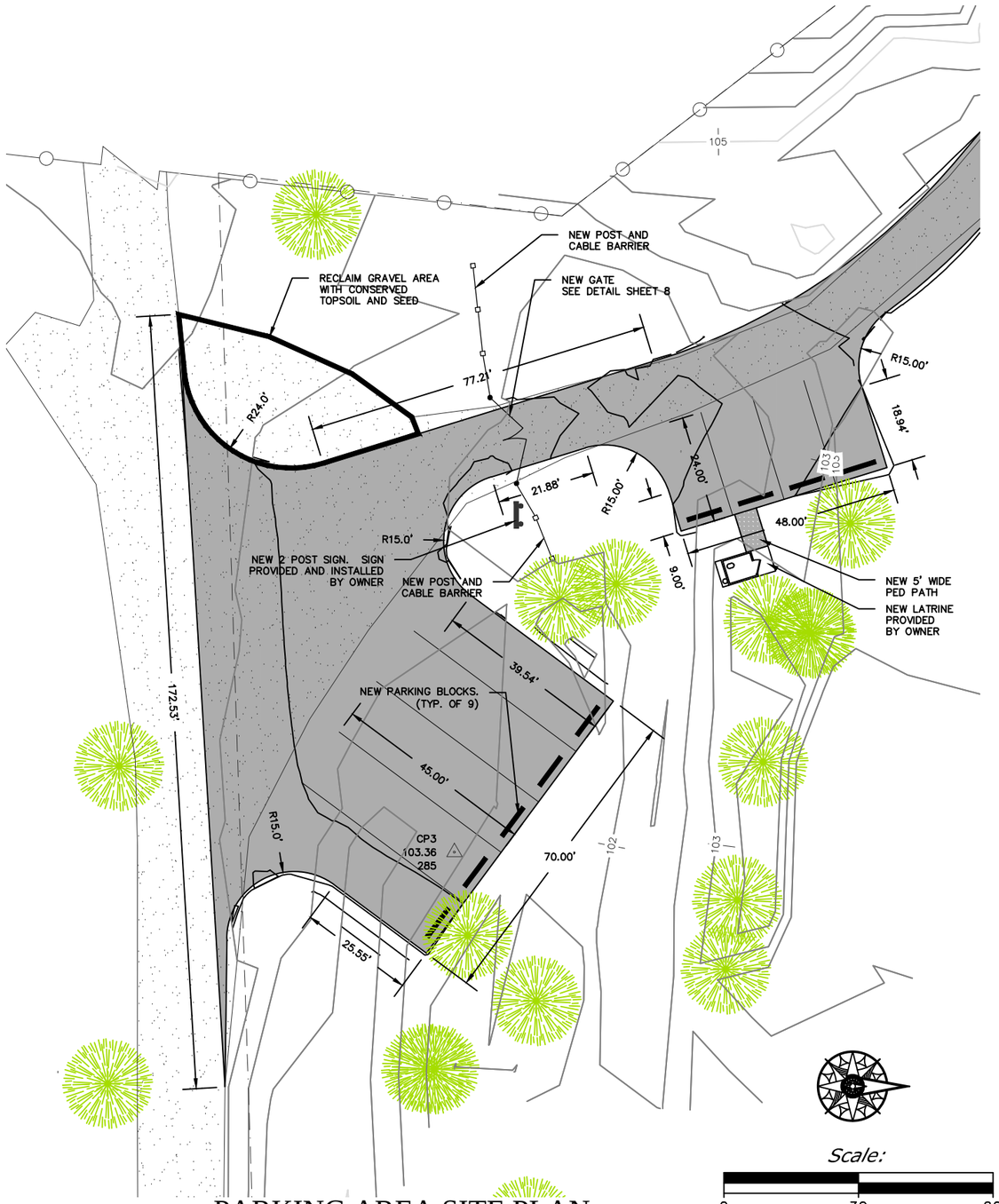
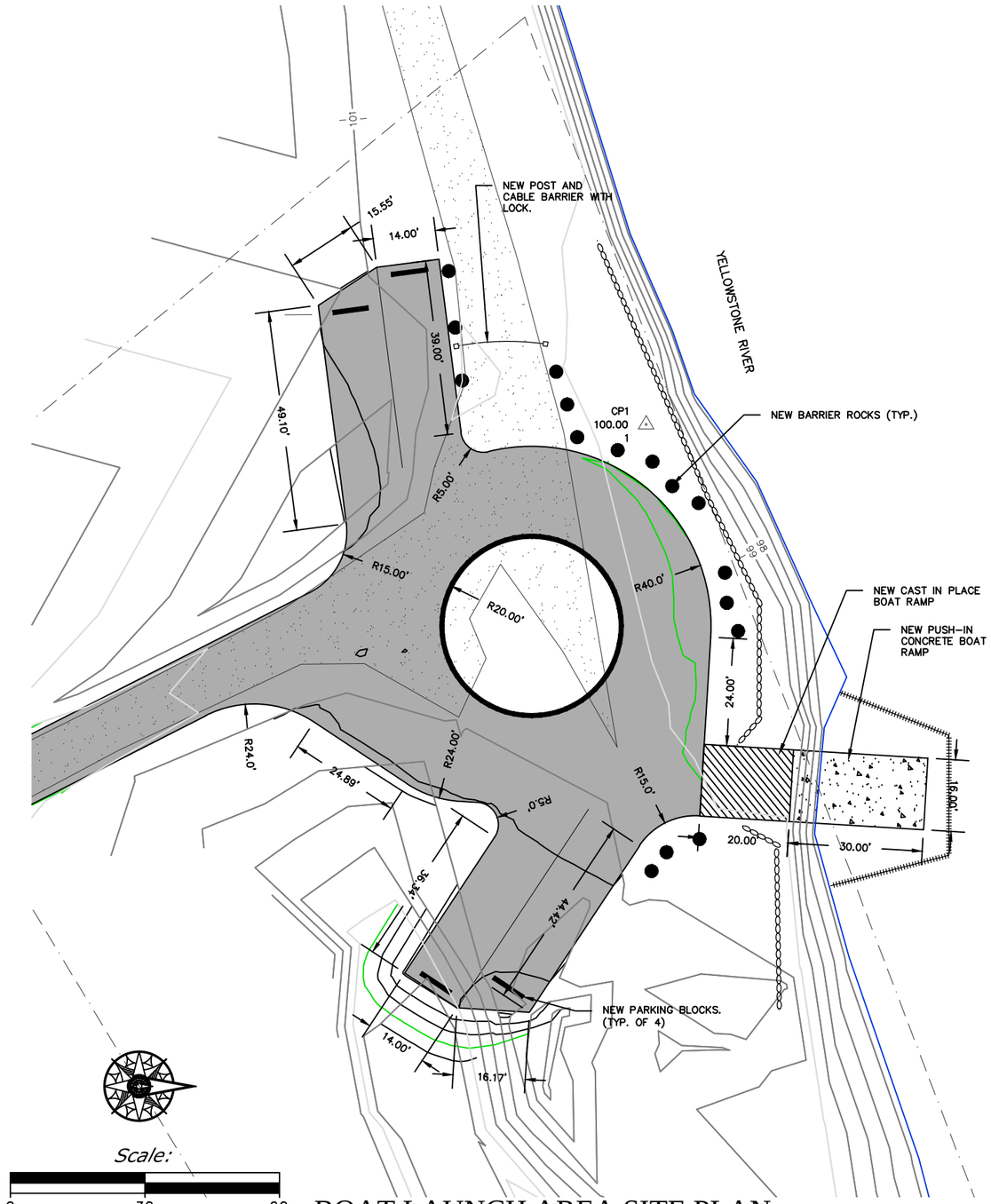
OVERALL SITE PLAN

AMELIA ISLAND FAS (NEAR HYSHAM, MT)

SHEET: 2 of 9



PARKING AREA SITE PLAN



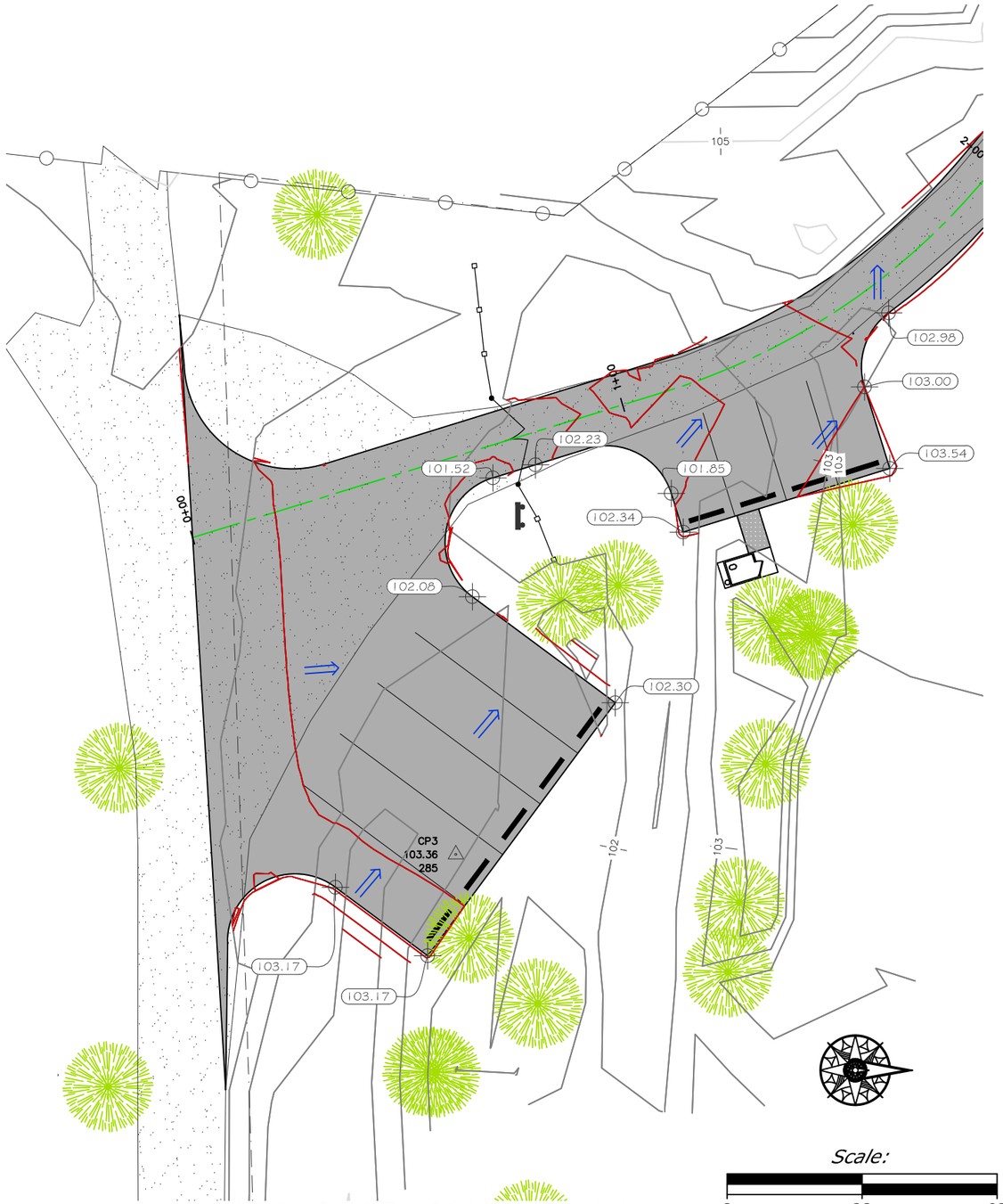
BOAT LAUNCH AREA SITE PLAN

J. Senn	08-26-14					SHEET:	3 of 9
DRAWN BY:	DATE:	APPROVED BY:	DATE:	APPROVED BY:	DATE:		
M. McNearney	08-15-14						
CHECKED BY:	DATE:	APPROVED BY:	DATE:	APPROVED BY:	DATE:		

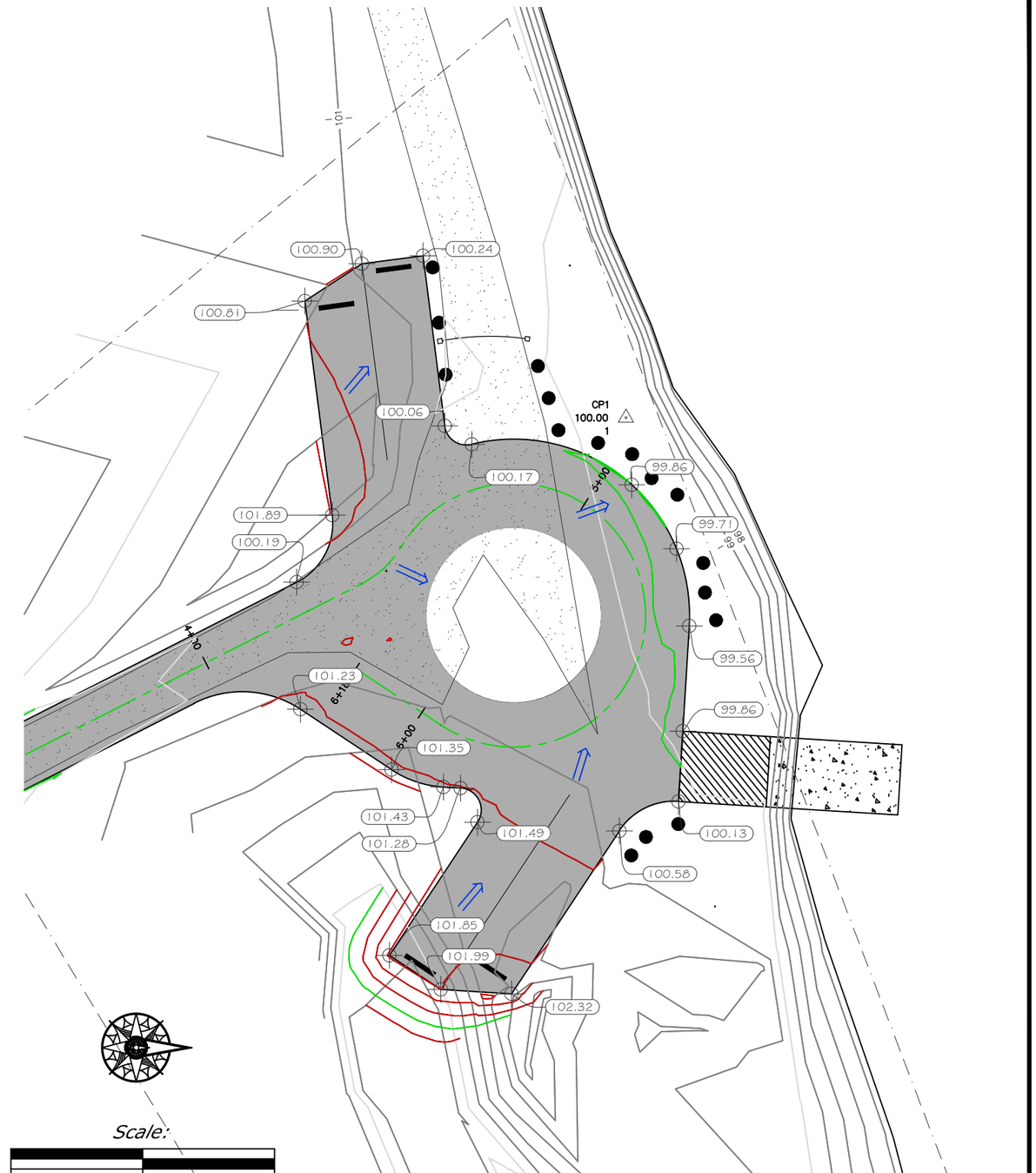
Montana Fish, Wildlife & Parks

DETAILED SITE PLAN

AMELIA ISLAND FAS (NEAR HYSHAM, MT)

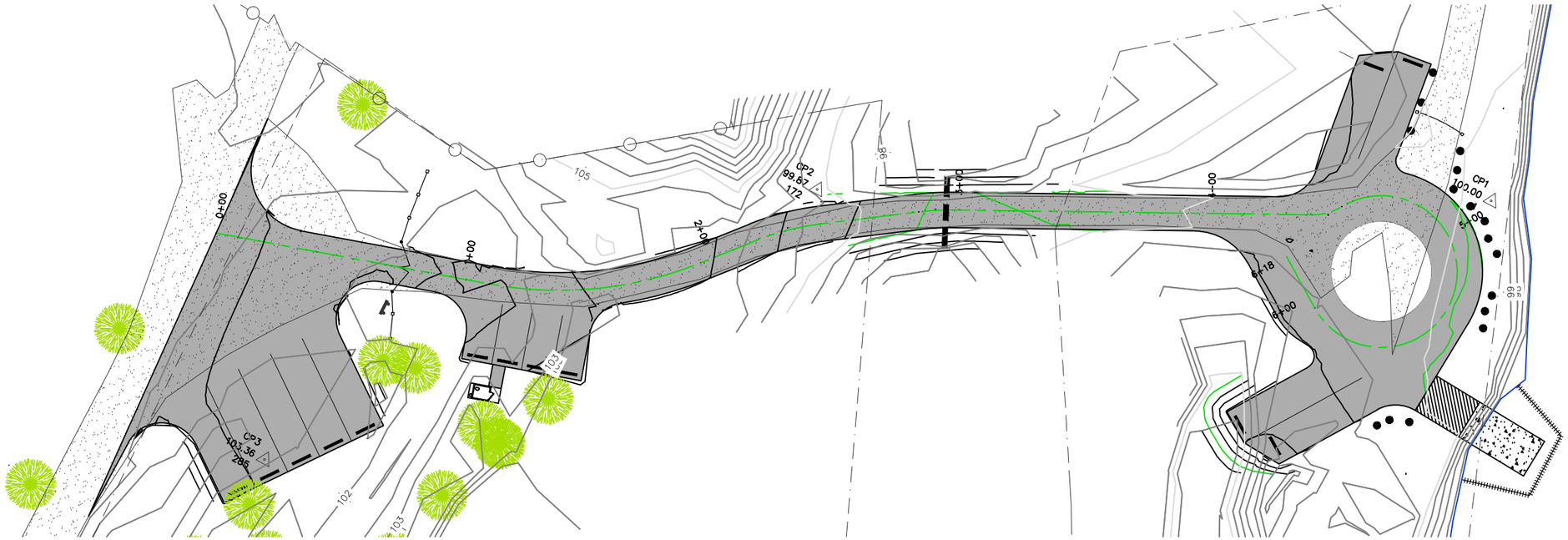


PARKING AREA GRADING PLAN



BOAT LAUNCH AREA GRADING PLAN

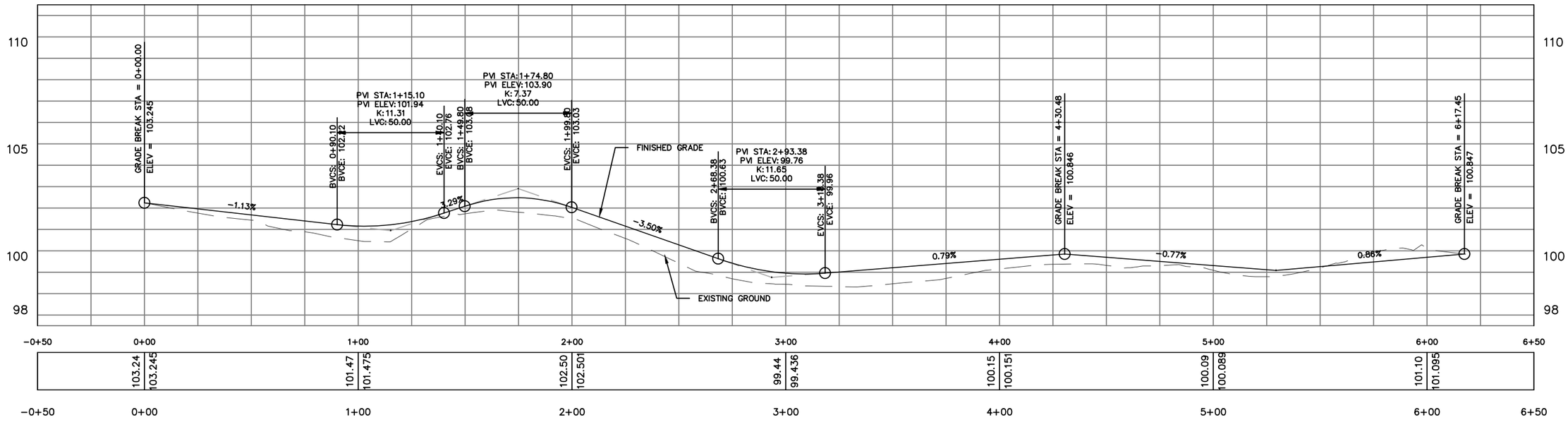
J. Senn 08-26-14	APPROVED BY: DATE:	APPROVED BY: DATE:	Montana Fish, Wildlife & Parks	DETAILED GRADING PLAN	SHEET: 4 of 9
DRAWN BY: DATE:				AMELIA ISLAND FAS (NEAR HYSHAM, MT)	
M. McNearney 08-15-14	APPROVED BY: DATE:	APPROVED BY: DATE:			
CHECKED BY: DATE:					



Scale:

0 50 100

ACCESS ROAD PROFILE



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M. McNearney	08-15-14				
CHECKED BY:	DATE:	APPROVED BY:	DATE:	APPROVED BY:	DATE:

Montana Fish, Wildlife & Parks

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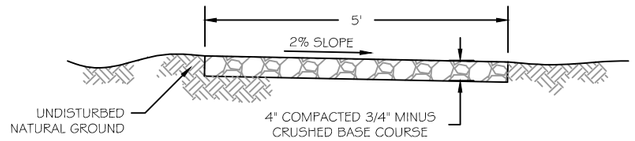
ACCESS ROAD P&P

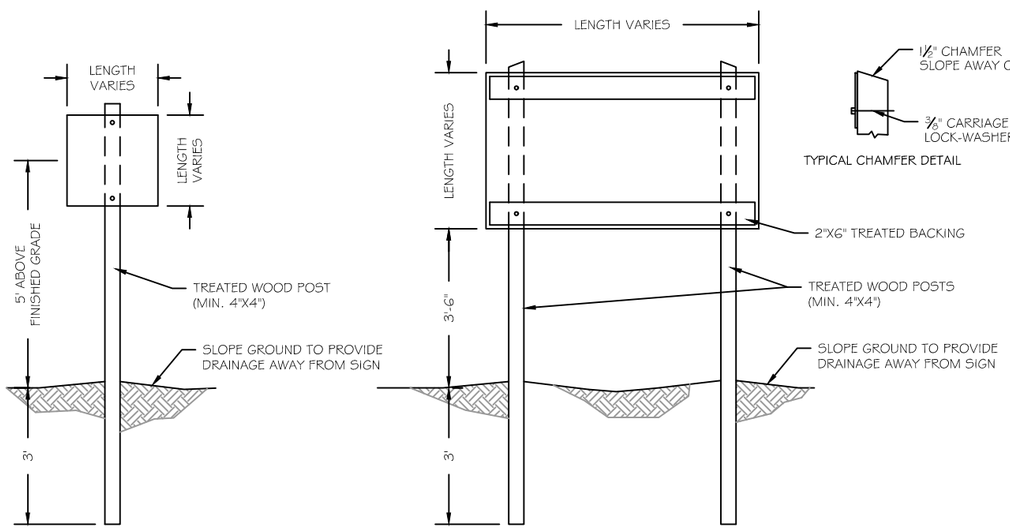
AMELIA ISLAND FAS (NEAR HYSHAM, MT)

SHEET: 5 of 9



TYPICAL PATH DETAIL

(NOT TO SCALE)



SIGN POST MOUNTING DETAIL

(NOT TO SCALE)

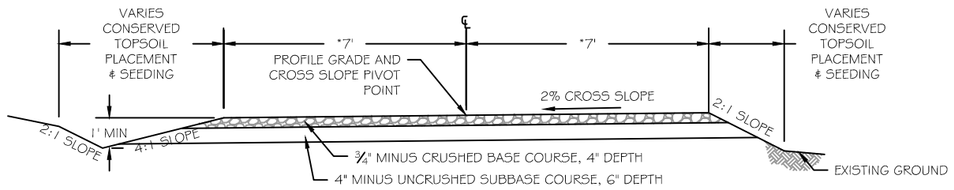
NOTES:

1. USE PRESSURE TREATED TIMBERS FOR ALL SIGN POSTS. NEED BREAK-AWAY HOLES (OR DEVICE) FOR LARGER POSTS.
2. COAT ALL POSTS WITH PRESERVATIVE FOR ALL DRILLED HOLES AND CUT SURFACES.
3. USE CADMIUM PLATED OR GALVANIZED STEEL FOR ALL BOLTS, NUTS & WASHERS.
4. PLACE BOLTS TO NOT INTERFERE WITH SIGN LETTERING. PAINT BOLT HEADS TO MATCH SIGN.
5. CENTER SINGLE POST PANELS TO POST, OVERHANG PANELS 3" BEYOND POSTS FOR DOUBLE POST INSTALLATIONS. EXTEND ALL POSTS 3" ABOVE SIGN PANELS.
6. SEE BREAK-AWAY DETAIL FOR POSTS LARGER THAN 4 INCHES IN DIAMETER.

TYPICAL SECTION NO. 1

0+00 to 4+00

(Not to Scale)



*SEE GRADING PLAN FOR ADDITIONAL WIDENING.

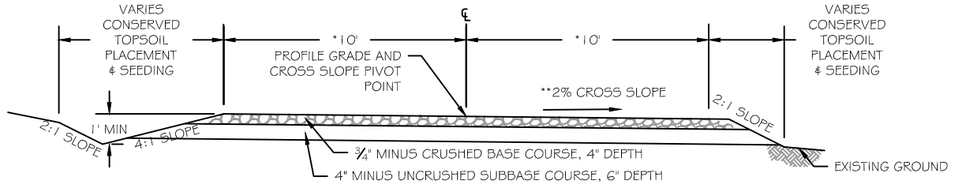
Cut Side
(Left or Right)

Fill Side
(Left or Right)

TYPICAL SECTION NO. 2

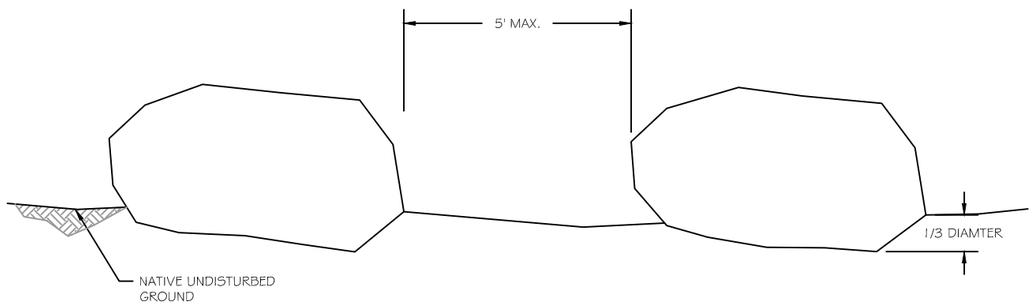
4+00 to END

(Not to Scale)



*SEE GRADING PLAN FOR ADDITIONAL WIDENING.

**SLOPE MAY VARY. SEE GRADING PLAN



BARRIER ROCK DETAIL

(NOT TO SCALE)

NOTES:

1. EMBED BARRIER ROCKS 1/3 OF BARRIER DIAMETER.
2. BACKFILL EACH BOULDER WITH BARRIER ROCK EXCAVATION MATERIAL.
3. SPACE BARRIER ROCKS AT A MAXIMUM DISTANCE OF 5 FT (EDGE TO EDGE).
4. PLACE BARRIER ROCKS 5-6 FT FROM EDGE OF ROAD (EDGE TO Gravel).

J. Senn 08-26-14		
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Montana Fish, Wildlife & Parks

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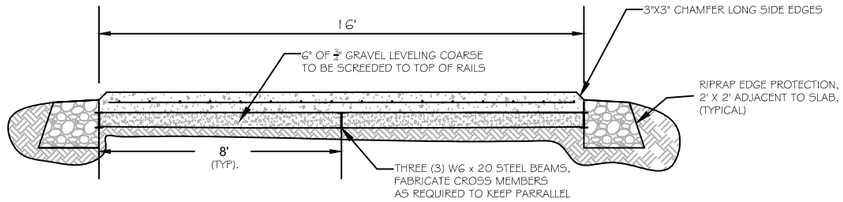
SITE DETAILS

AMELIA ISLAND FAS (NEAR HYSHAM, MT)

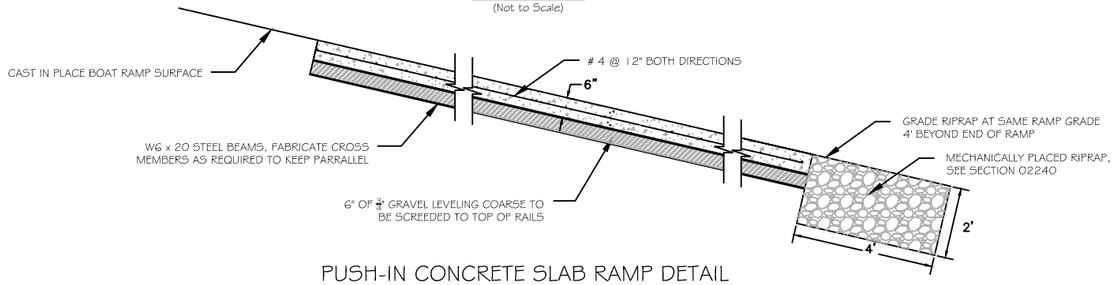
SHEET: 6 of 9



PUSH-IN CONCRETE SLAB RAMP DETAIL

SECTION VIEW

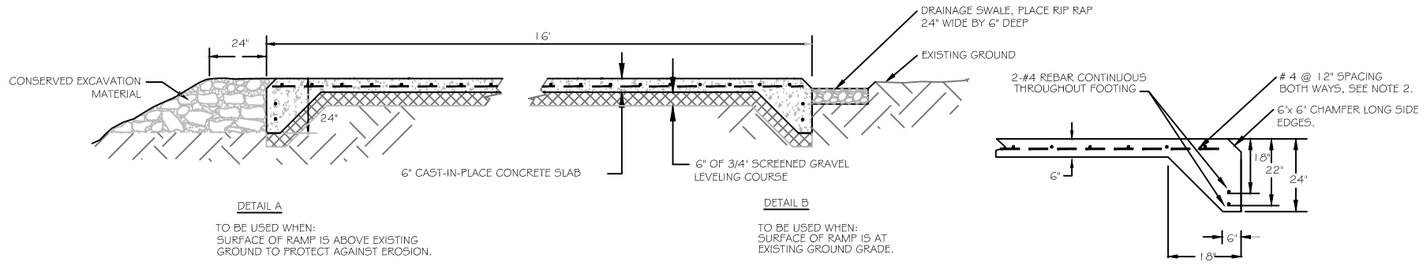
(Not to Scale)



PUSH-IN CONCRETE SLAB RAMP DETAIL

ELEVATION VIEW

(Not to Scale)

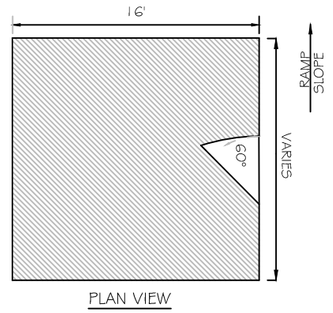


CAST-IN-PLACE CONCRETE

SECTION A-A'

THICKENED EDGE DETAIL

FOR CAST IN PLACE RAMP



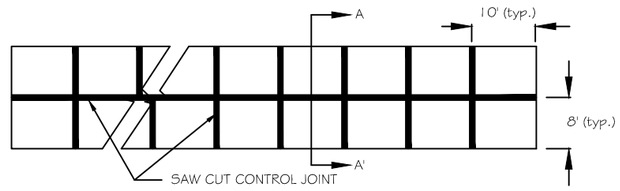
PLAN VIEW

NOTE:

1. MFW&P WILL PROVIDE GROOVING TOOL, SEE SPECIFICATION, SECTION 03310.

GROOVED SURFACE

(Not to Scale)



NOTES:

1. CONCRETE FOR NEW RAMP IS A 3/4" MINUS; 6-1/2 BAG MIX WITH A MIN 28 DAY STRENGTH OF 4000 PSI, REINFORCED WITH # 4 BARS @ 12" SPACING BOTH DIRECTIONS.
2. CONCRETE SHALL BE VIBRATED AND SCREEDED BEFORE SURFACE FINISH IS APPLIED.
3. SURFACE FINISH SHALL BE - BULL FLOATED FOLLOWED BY GROOVING.
4. CONTRACTION JOINTS SHALL BE SAW CUT AFTER RAMP IS GROOVED.

SLAB CONTROL JOINT DETAIL

PLAN VIEW

(Not to Scale)

CAST IN PLACE SLAB NOTES:

1. CONTINUE THICKENED EDGE FOOTING AROUND ENTIRE PERIMETER OF CAST-IN-PLACE CONCRETE.
2. EXTEND AND EXPOXY #4 BARS MIN 20" (12" O.C.) IN EXISTING CONCRETE CONNECTIONS. PROVIDE EXPANSION JOINT MATERIAL ALONG COLD JOINT CONNECTIONS.
3. NO CHAMFER ALONG SIDEWALK/BULKHEAD/EXISTING CONCRETE CONNECTIONS.
4. PROVIDE 2½" CLEAR COVER FOR ALL REBAR REINFORCEMENT.

PUSH IN SLAB NOTES:

5. ALL PUSH-IN SLAB SECTIONS SHALL BE CAST AT APPROXIMATELY THE SAME SLOPE AS THEY ARE TO BE PLACED.
6. ALL PUSH-IN SECTIONS SHALL BE ALLOWED TO CURE FOR A MINIMUM OF 14 DAYS.
7. ALL PUSH IN SECTIONS SHALL BE CAST ON A SMOOTH 4" LAYER OF COMPACTED AGGREGATE.
8. DEPENDING ON CONSTRUCTION EQUIPMENT OR WORKING AREA LIMITATIONS, CONTRACTOR MAY HAVE TO MAKE MULTIPLE PUSH-IN SLAB POURS PRIOR TO FINAL INSTALLATION. ALL SEPARATE POURS WILL REQUIRE REBAR PLACEMENT AS DESCRIBED IN NOTE 5.
9. REBAR SHALL BE EPOXIED INTO FIRST SLAB AND EXTENDED A MINIMUM OF 20" INTO SUBSEQUENT SLAB(S).
10. CONTRACTOR MAY ELECT TO FABRICATE ANGLE IRON ALONG EDGE OF OUTER STEEL SUPPORT BEAMS TO HELP DIRECT PUSH-IN SLAB DURING INSTALLATION.
11. PROVIDE 2½" CLEAR COVER FOR ALL REBAR REINFORCEMENT.
12. PLACE RIPRAP EDGE PROTECTION AT THE SAME GRADE OF PUSH-IN SLAB. KEY IN RIPRAP BY MECHANICAL TAMPING METHODS TO PROVIDE FLUSH SURFACE.

J. Senn	08-26-14				
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M. McNearney	08-15-14				
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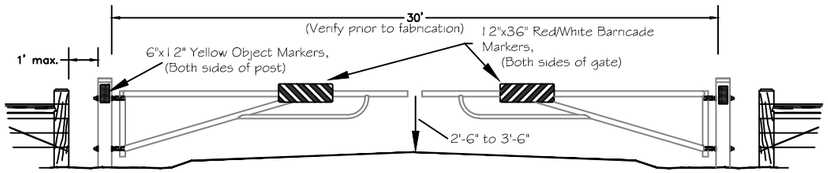
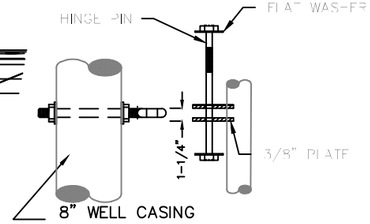
BOAT RAMP DETAILS

AMELIA ISLAND FAS (NEAR HYSHAM, MT)

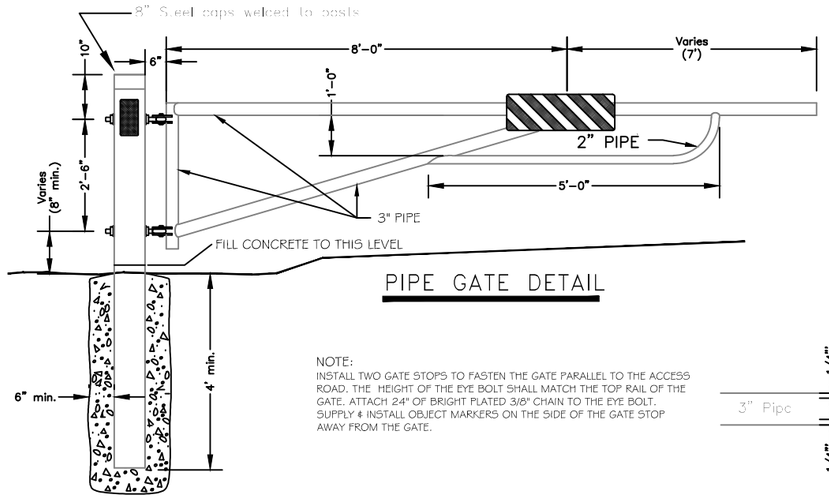
SHEET: 7 of 9



ELEVATION



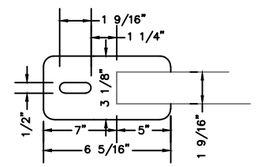
HINGE DETAIL



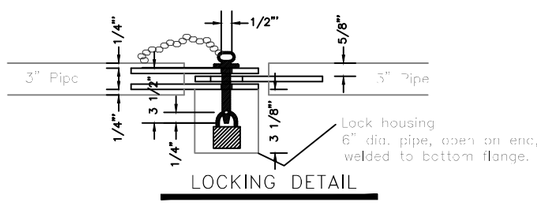
PIPE GATE DETAIL

NOTE:
INSTALL TWO GATE STOPS TO FASTEN THE GATE PARALLEL TO THE ACCESS ROAD. THE HEIGHT OF THE EYE BOLT SHALL MATCH THE TOP RAIL OF THE GATE. ATTACH 24" OF BRIGHT PLATED 3/8" CHAIN TO THE EYE BOLT. SUPPLY & INSTALL OBJECT MARKERS ON THE SIDE OF THE GATE STOP AWAY FROM THE GATE.

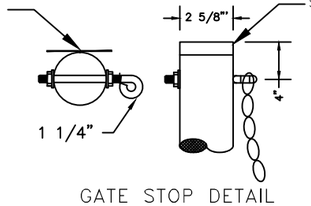
Concrete footing



MIDDLE FLANGE

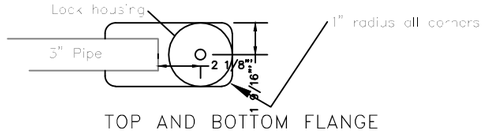


LOCKING DETAIL



LOCATE STOPS AS PER PLAN, SET IN CONCRETE AS PER 8" GATE SUPORTS.

GATE STOP DETAIL



TOP AND BOTTOM FLANGE

GENERAL NOTES

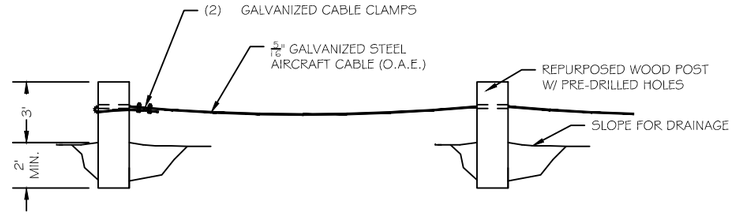
1. STEEL CAPS FOR GATE POSTS SHALL BE WELDED TO POST AND GROUND SMOOTH.
2. ALL BOLTS TO BE HARDNESS RATING OF GRADE A
3. ALL PIPE FOR GATE TO BE SCHEDULE 40
4. POSTS FOR GATE & STOPS TO BE STANDARD STEEL WELL CASING.
5. GATE AND ALL POSTS TO BE FINISHED w/ POLYUREATHANE PAINT.(SEE SECTION 09900-FINISHES)
6. ALL WELDS TO BE GROUND SMOOTH.
7. LENGTH OF GATE & STOP POSTS VARIES DEPENDING ON TERRAIN. ADJUST LENGTH AS NECESSARY FOR FINISH GRADE ELEVATIONS.

HINGE DETAILS

1. HINGE BOLT THREADS TO BE EXPOSED A MIN. OF 1 1/2" BEYOND NUTS ON EITHER SIDE OF THE GATE POST TO ALLOW ADJUSTMENT.
2. PROVIDE 3/4"x3" HINGE PINS FOR EACH HINGE.
3. GREASE THREADS OF HINGE BOLTS BEFORE INSTALLING.

LOCK DETAILS

1. USE A 3 1/2" x 7/8" HITCH PIN, BEVEL END AND DRILL LOCK HOLE TO ACCEPT 3/8" HASP.
2. IF THE CONTRACTOR WISHES TO USE THEIR OWN LOCK DURING CONSTRUCTION PROVIDE A KEY TO THE PROJECT MANAGER AND REGIONAL MAINTENANCE SUPERVISOR. INSTALL FWP #2661 MASTER LOCK AT FINAL ACCEPTANCE.
3. ATTACH 24" OF BRIGHT PLATED 3/8" CHAIN TO PIN AND OTHER END TO PIPE



BARRIER POST AND CABLE DETAIL

(Not to Scale)

NOTES:
1. ENSURE POSTS ARE PLUMB AND TRUE. TAMP SOIL TIGHT TO MAINTAIN POSITION.
2. PULL CABLE TIGHT ENOUGH TO MINIMIZE DEFLECTION WITHOUT PULLING POSTS FROM PLUMB POSITION.
3. USE CADMIUM PLATED OR GALVANIZED STEEL FOR ALL CABLE CLAMPS, BOLTS, NUTS & WASHERS.

J. Senn	08-26-14				
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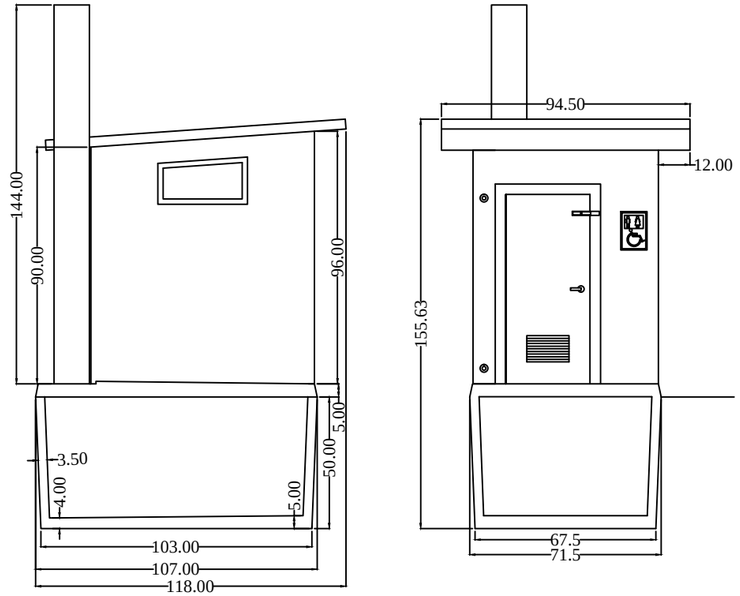
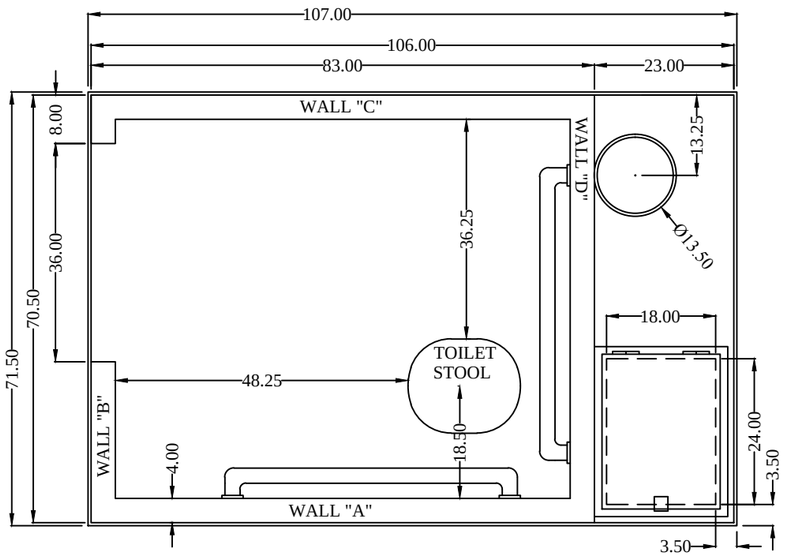
Montana Fish, Wildlife & Parks

GATE DETAILS
AMELIA ISLAND FAS (NEAR HYSHAM, MT)

SHEET: 8 of 9

For Information Only
Latrine Suppied By Other





INSTALLATION

General Installation involves excavation, leveling bottom of hole with drain aggregate, installing latrine, backfilling around latrine and landscaping.

EXCAVATION

A. Excavate subsoil to a point 12 inches deeper than required for latrine installation.

   1. Depth of excavation is 50 inches for the precast latrines manufactured by Flathead Concrete.

   2. Finish floor elevation shall be a minimum of 4-6 inches above natural grade measured at the front entrance.

B. Minimize over excavation. Stockpile excavated material for later backfilling and landscaping.

C. Compact bottom of hole with three passes of whacker or skid plate compaction device.

LEVELING

A. Use small gravel, 3/8 inch minus gravel, and place enough in bottom of hole such that when compacted, it will be 12 inches deep.

B. Compact leveling material with three passes of compaction device.

C. Level base for installation of latrine.

LATRINE INSTALLATION

A. The precast latrine will be set by the supplier.

B. Insure that latrine sits level and plumb when done installing.

BACKFILLING

A. Place a foot of 3/8 inch gravel around base of vault and compact.

B. Place in successive 8 inch layers material previously excavated from hole and compact.
   1. Remove rocks larger than 6 inches in diameter from the fill.

   2. Remove branches, roots and other or organic debris in fill.

LANDSCAPING

A. Slope grade away from latrine.

B. Blend fill slope into surrounding terrain.

C. Remove surplus fill material.

D. Remove soil to a depth of 2 inches beneath location for entrance slab and compact.

E. Place two inches of 3/4 inch pea gravel for bedding, level and compact.

J. Senn 08-26-14 DRAWN BY: DATE: M. McNearney 08-15-14 CHECKED BY: DATE:	REVISED BY: DATE: APPROVED BY: DATE:	APPROVED BY: DATE: APPROVED BY: DATE:	Montana Fish, Wildlife & Parks	LATRINE DETAILS AMELIA ISLAND FAS (NEAR HYSHAM, MT)	SHEET: 9 of 9